

N<sup>o</sup> 27,813



A.D. 1897

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*Complete Specification Left, 24th Aug., 1898—Accepted, 8th Oct., 1898*

### PROVISIONAL SPECIFICATION.

#### Improvements in and connected with Lavatories and like Washing Apparatus.

I, JOHN SHANKS, of Tubal Works, Barrhead, in the County of Renfrew, North Britain, Sanitary Engineer, do hereby declare the nature of this invention to be as follows, that is to say:—

My said invention comprises various improvements in and connected with lavatories and like washing apparatus, and has for its object increased convenience and other advantages in use, with economy in construction and facility in fitting up, in cleaning and in repairing.

A lavatory basin made and provided with a modification of my present improvements, is preferably of earthenware and formed with a flange or lugs at the back to be cemented or built into a wall; and with the view of avoiding other fixtures to the wall, dovetail or other sockets are formed in the bottom of the basin piece to receive screw studs which are firmly fixed by a wedge action or otherwise and which have hooks or brackets bolted to them to support pipes or other parts.

The seat or port for the basin discharge valve is formed in the basin piece itself and is of a conical form. In some modifications an internal discharge valve opens inwards or upwards; and in others the seat surface is external to the basin proper the valve being applied externally. In one modification an internal heavy valve with a rubber flange is used and is covered by a grating up through the centre of which the spindle or handle of the valve passes. The grating is fixed by screws to bolts passing through holes made for them through the bottom of the basin, the discharge pipe made with a wide flange being fixed to them by screw nuts. In another modification a heavy internal valve having a rubber flange, is made with a hollow downward extension having holes in its sides below the rubber flange, the extension entering the discharge pipe which guides it. A bayonet slot formed in the hollow extension has projecting into it a pin fixed through the discharge pipe, this pin holding the valve open when it has been raised and turned round a little. Instead of a separate fixed grating the upper part of the valve is made with star-like projections which serve as a grating. In another modification a vulcanite seating is fixed in the discharge opening of the basin, and the valve is made of or coated with vulcanite. Any of these discharge valve parts may be arranged in the bottom of an overflow passage or recess instead of being the bottom of the basin proper. An inclined metal grating is in some cases fixed at the top of the overflow passage in preference there being an opening through the back of the basin proper; and in some cases the overflow passage is a short one not leading into the waste pipe but discharging into a gutter below.

In the external-seat modifications the discharge orifice is in the bottom of the back of the basin, the valve closing towards the basin. A

[Price 8d.]

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spring may be applied for opening or for closing the valve, or the mechanism for opening may be arranged so that its weight when not held by a catch may close or open the valve. The valve may be on the lower end of a curved rod guided so as when drawn up to move the valve away from its seat. Or the valve may be moved by means of a handle or by means of a treadle connected 5 to it by a bellcrank or in an equivalent manner.

My invention comprises also improved water-supply fittings for the lavatory. In these a metal box has connected to its under side hot water and cold water supply pipes to which are applied screw-down valves the handle spindles of which extend upwards through stuning boxes. In the middle of the box there is a 10 conical seating preferably of wide angle for a plug formed at the bottom of a short hollow column and having two ways in it, of which one, is for communicating with a spout delivering into the basin, whilst the other is for communicating with the interior of the column. Either communication is open according to the position of the column the other being then closed. The top of the column has 15 attached to it by a horizontal swivelling plug joint a curved pipe, which at its outer end has formed on or fixed to it a hollow conical plug, preferably of wide angle, formed with two ports or sets of ports. There is fitted to turn on the plug a conical socket or seat formed in the interior of a bell-shaped piece having fixed to it a central nozzle, and an annular perforated plate. In one position of the 20 bell the central nozzle receives water through the plug, and in another position the water has access to the perforated plate. When the column is turned with the curved pipe to the back, water is delivered into the basin; but when the column is turned to bring the curved pipe forwards water has access through the column and pipe to the bell, and by adjusting the bell can be made to issue as a 25 central stream or douche or as a shower. The curved pipe can be turned in the top of the column so as to place the bell in a vertical horizontal or inclined position.

For only a cold water or single water supply the parts may be simplified, separate stop valves giving communication, one to the basin spout and the other 30 to the curved arm and bell.

Dated this Twenty-fifth day of November 1897.

EDMUND HUNT,  
Applicant's Agent

## COMPLETE SPECIFICATION. 35

**Improvements in and connected with Lavatories and like Washing Apparatus,**

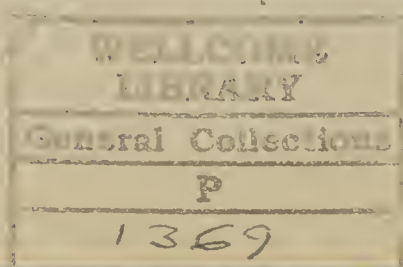
I, JOHN SHANKS, of Tubal Works, Barrhead, in the County of Renfrew, North Britain, Sanitary Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and 40 ascertained in and by the following statement, that is to say:—

My said invention comprises various improvements in and connected with lavatories and like washing apparatus, and has for its object increased convenience and other advantages in use, with economy in construction, and facility in fitting up, in cleaning, and in repairing. 45

And in order that my said invention and the manner of performing the same may be properly understood I hereunto append two sheets of explanatory drawings to be hereinafter referred to and showing my improvements. In these drawings



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the same reference letters and numerals are used to mark the same or like parts wherever they are repeated.

Part of a lavatory basin made and provided with some of my present improvements, is shown in Figures, 1, and 3, which are vertical sections. The basin, A, is preferably of earthenware, and formed with flanges or lugs, A<sup>1</sup>, (shown by dotted lines) at the back to be cemented or built into a wall, A<sup>2</sup>, and with the view of avoiding other fixtures to the wall a dovetail socket, A<sup>3</sup>, (Figure 3) is formed in the bottom of the basin piece, A, to receive a screw stud, B, which is firmly fixed by wedges, B<sup>1</sup>, and which has a hook or bracket, B<sup>2</sup>, bolted to it to support a discharge pipe, B<sup>3</sup>, or other parts. In Figure, 2, which is an elevation as at right angles to Figures, 1, and 3, the screw stud, B, is made with a T-shaped head which fits in a correspondingly shaped socket, A<sup>3</sup>, in the basin piece, A. The seat or port, C, (Figure, 1) for the basin discharge valve, C<sup>1</sup>, is formed in the basin piece, A, itself and is at its lower part of an approximately conical form. The valve, C<sup>1</sup>, is made with a rubber flange, C<sup>2</sup>, and is covered by a grating, C<sup>3</sup>, up through the centre of which the spindle or handle, C<sup>4</sup>, of the valve passes, the valve being thus what may be termed an internal discharge valve opening inwards or upwards.

As shown in Figures, 4, and 5, which are, respectively, a plan and a vertical section, the grating, C<sup>3</sup>, is fixed by screws, D, to bolts, D<sup>1</sup>, passing through holes made for them through the bottom of the basin, A, the discharge pipe, B<sup>3</sup>, made with a wide flange, B<sup>4</sup>, being fixed to them by screw nuts, D<sup>2</sup>.

In another modification, shown in Figures, 6, and 7, which are, respectively, a plan and a vertical section, a heavy internal valve, C<sup>1</sup>, having a rubber flange, C<sup>2</sup>, is made with a hollow downward extension, E, having holes, E<sup>1</sup>, in its sides below the rubber flange the extension entering the discharge pipe, B<sup>3</sup>, which guides it. A bayonet slot, E<sup>2</sup>, formed in the hollow extension, E, has projecting into it a pin, E<sup>3</sup>, fixed through the discharge pipe, B<sup>3</sup>, this pin holding the valve, C<sup>1</sup>, open when it has been raised and turned round a little. Instead of a separate fixed grating (C<sup>3</sup> Figures, 1, 4, and 5) the upper part of the valve, C<sup>1</sup>, is made with star-like projections, C<sup>5</sup>, which serve as a grating.

As shown in Figure, 8, which is a vertical section, the hollow downward extension, E, of the valve, C<sup>1</sup>, entering the discharge pipe, B<sup>3</sup>, is perforated with a number of small holes, E<sup>1</sup>. The valve spindle, C<sup>4</sup>, in this modification, extends up to near the top of the basin, A, its upper end passing through and being guided by a bracket, F, bolted to the back of the basin, A. On the underside of the spindle handle there is a small projection, F<sup>1</sup>, which when the valve, C<sup>1</sup>, is shut rests in a recess formed for it in the bracket, F, this projection, F<sup>1</sup>, holding the valve open when it has been raised and turned round a little as the projection is thus removed from the recess and its lower end then rests on the top of the bracket, F.

In the modification shown in Figure, 9, which is a vertical section, the perforated part of the valve, is made with a wire cage, F<sup>2</sup>, placed on the spindle, C<sup>4</sup>, above the valve C<sup>1</sup>, instead of a perforated extension (E) below the valve. The valve is, in this modification, held in its open position by a pin, E<sup>3</sup>, on the spindle, C<sup>4</sup>, working in a bayonet socket, E<sup>2</sup>, in a plate, F<sup>3</sup>, fixed to the side of the basin, A.

In another modification shown in Figure, 10, which is a vertical section, a vulcanite seating, G, is fixed in the discharge passage from the basin, and the valve, C<sup>1</sup>, is hollow and made of, or it might be coated with, vulcanite. An opening, C, is formed in the back, A<sup>4</sup>, of the basin, A, to permit of the water passing to the discharge when the valve, C<sup>1</sup>, is raised. The discharge valve parts are in this modification arranged in the bottom of an overflow passage or recess, G<sup>1</sup>, instead of being in the bottom of the basin itself as in the modifications hereinbefore described, in which modifications the overflow passage, G<sup>1</sup>, is behind the discharge valve, C<sup>1</sup>.

As shown in Figure, 7, an inclined metal grating, G<sup>2</sup>, is fixed at the top of

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the overflow passage, G<sup>1</sup>, and in some cases the overflow passage may be one not leading into the waste pipe (B<sup>3</sup>) but discharging into a gutter below (not shown).

In the modifications shown in Figures, 11, 12, and 13, which are vertical sections, the discharge orifice, C, is in the bottom of the back of the basin, A, the valve, C<sup>1</sup>, closing towards the basin. In Figure, 11, the valve, C<sup>1</sup>, is on the 5 lower end of a curved rod, H, fitted to slide on a stud, H<sup>1</sup>, the upper end of the rod having a pin, E<sup>3</sup>, which engages in a notch in a catch plate, H<sup>2</sup>, fixed to the basin, A, to keep the valve shut, and when the pin, E<sup>3</sup>, is freed from the notch and the curved rod, H, drawn up the valve, C<sup>1</sup>, is moved away from its seat. In this position the valve is held open by the pin, E<sup>3</sup>, engaging with 10 a second notch, H<sup>3</sup>, in the catch plate, H<sup>2</sup>.

As shown in Figure, 12, the valve, C<sup>1</sup>, is made with a spindle, J, projecting out from its back to which spindle a bellcrank, J<sup>2</sup>, and treadle, J<sup>3</sup>, are attached and the valve is kept shut by the weight of the treadle, J<sup>3</sup>, and connections and is opened by raising it. Instead of the treadle, J<sup>3</sup>, a handled rod, J<sup>5</sup>, shown 15 by dotted lines may be attached to the bellcrank, J<sup>2</sup>, for actuating the valve, C<sup>1</sup>.

In Figure, 13, the end of the valve spindle, J, has fixed on it a small piston, K, working in a cylinder, K<sup>1</sup>, to one end of which water under pressure has access through a pipe, K<sup>2</sup>, and acting on the piston, K, tends to keep the valve, C<sup>1</sup>, shut. A handled lever, K<sup>3</sup>, is centered in a bracket, K<sup>4</sup>, and its lower end passes 20 through a slot in the valve spindle, J, so that on moving the lever, K<sup>3</sup>, the valve, C<sup>1</sup>, can be opened against the pressure of the water, the pressure closing it on the handle being let go.

My invention comprises also improved water supply fittings for the lavatory, of which two modifications are shown on Sheet Two of the drawings, Figures, 14, 25 and 15, being front and side elevations partly in section of one modification; and Figure, 16 being a perspective view of a second modification.

As shown in Figures, 14, and 15, a metal box, L, has connected to its underside hot-water and cold-water supply pipes, L<sup>1</sup>, L<sup>2</sup>, to which are applied screw-down valves, L<sup>3</sup>, L<sup>4</sup>, the handled spindles, L<sup>5</sup>, L<sup>6</sup>, of which extend upwards 30 through the stuffing boxes, L<sup>7</sup>, L<sup>8</sup>. In the middle of the box, L, there is a conical seating, M, preferably of wide angle for a plug, M<sup>1</sup>, formed at the bottom of a short hollow column, M<sup>2</sup>, and having two ways, M<sup>3</sup>, M<sup>4</sup>, in it, of which one, M<sup>4</sup>, is for communicating with a spout, M<sup>5</sup>, delivering into the basin (not shown) whilst the other, M<sup>3</sup>, is for communicating with the interior of the 35 column, M<sup>2</sup>. Either communication is open according to the position of the column, M<sup>2</sup>, the other being then shut. In the drawings the way, M<sup>4</sup>, is shown open and communicating with the spout, M<sup>5</sup>, the other way, M<sup>3</sup> being shut. The top of the column, M<sup>2</sup>, has attached to it by a horizontal swivelling plug joint, N, having a way, N<sup>1</sup>, through it, a curved pipe, N<sup>2</sup>, which at its outer 40 end has fixed to it a hollow conical plug, N<sup>3</sup>, preferably of wide angle, and formed with two sets of ports, P<sup>1</sup>, P<sup>2</sup>. There is fitted to turn on the plug, N<sup>3</sup>, a conical socket or seat, P<sup>3</sup>, formed in the interior of a bell-shaped piece, P<sup>4</sup>, having fixed to it a central nozzle, Q, and a perforated plate, Q<sup>1</sup>. In one position of the bell, P<sup>4</sup>, as shown, the central nozzle, Q, receives water through the 45 plug, N<sup>3</sup>, and in another position the water has access to the perforated plate, Q<sup>1</sup>. When the column, M<sup>2</sup>, is turned with the curved pipe, N<sup>2</sup>, to the back, as shown, water is delivered into the basin (A) through the spout, M<sup>5</sup>, but when the column, M<sup>2</sup>, is turned to bring the curved pipe, N<sup>2</sup>, forwards water has access through the column and pipe to the bell, P<sup>4</sup>, and by adjusting the bell, as de- 50 scribed, can be made to issue as a central stream or douche or as a shower. The curved pipe, N<sup>2</sup>, can be turned in the top of the column, M<sup>2</sup>, so as to place the bell, P<sup>4</sup>, in a vertical, horizontal or inclined position.

For only a cold water or single water supply the parts may be simplified. As shown in Figure, 16, separate stop valves, R<sup>1</sup>, R<sup>2</sup>, are used, giving communica- 55 tion, one to the basin spout, M<sup>5</sup>, and the other to the curved arm, N<sup>2</sup>.



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Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

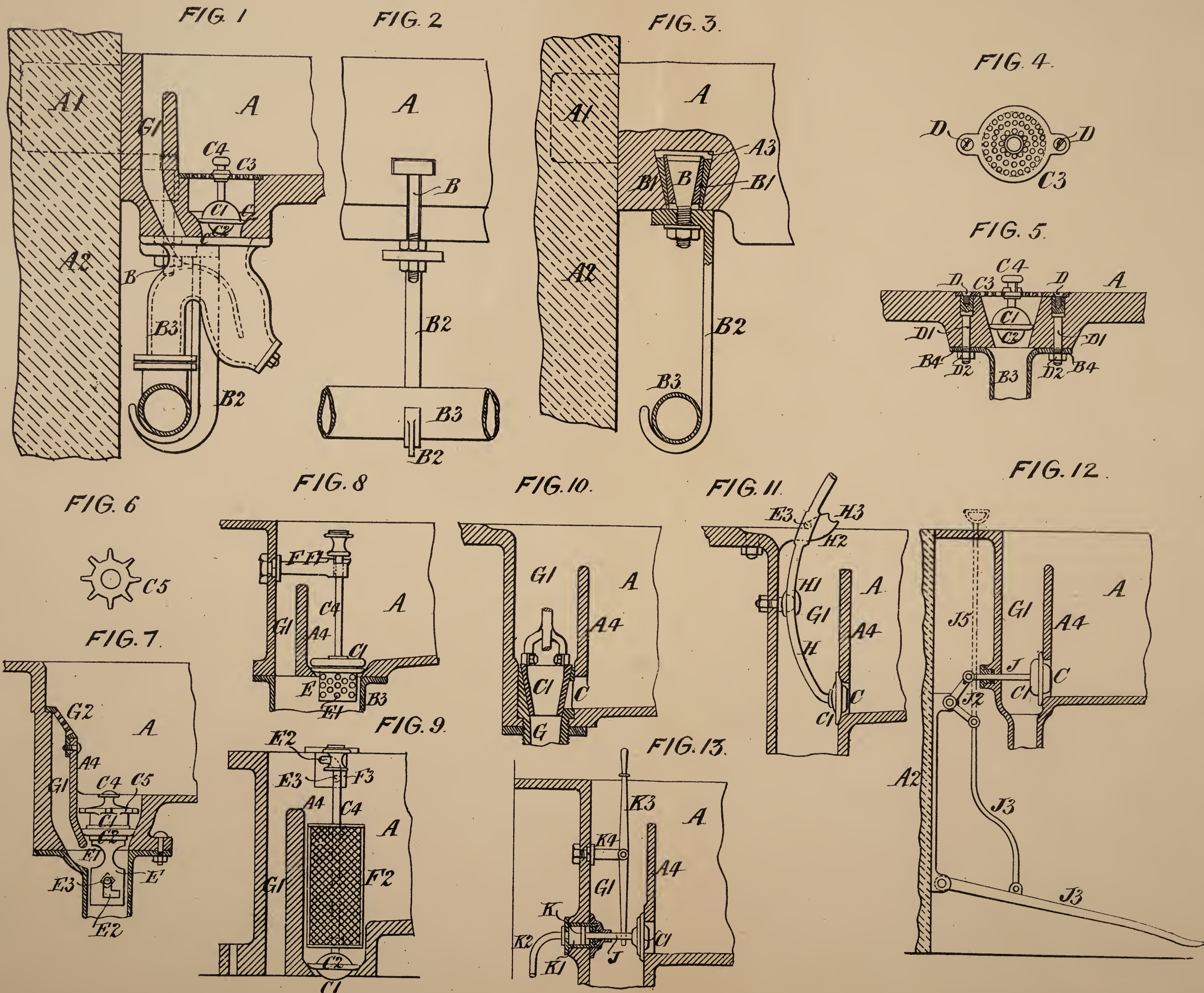
1. In combination a lavatory basin fixed to a wall by flanges or lugs cemented  
5 or built in, and devices for attaching parts to the basin substantially as hereinbefore described with reference to Figures, 1, 2, and 3, of the accompanying drawings.
2. The construction of the discharge passage and valve as shown in Figure, 1, of the accompanying drawings and hereinbefore described.
- 10 3. The mode of attaching the grating and discharge pipe as shown in Figures, 4, and 5, of the accompanying drawings and hereinbefore described.
4. The construction and adaptation of the discharge valve as shown in Figures, 6, and 7, of the accompanying drawings and hereinbefore described.
- 15 5. The adapting of an inclined grating to the top of the overflow passage as shown in Figure, 7, of the accompanying drawings and hereinbefore described.
6. The modifications of the discharge valve shown in Figures, 8, and 9, of the accompanying drawings and hereinbefore described.
7. The construction of discharge valve and seat shown in Figure, 10, of the accompanying drawings and hereinbefore described.
- 20 8. In a lavatory basin or the like applying and arranging a discharge valve to close towards the basin substantially as hereinbefore described with reference to Figures, 11, 12, and 13, of the accompanying drawings.
9. Constructing and adapting water-supply fittings to a lavatory basin or the like substantially in the manner and for the purposes hereinbefore described with  
25 reference to Figures, 14, and 15, of the accompanying drawings.
10. The modification of water-supply fittings shown in Figure, 16 of the accompanying drawings and hereinbefore described.

Dated this Twenty-third day of August 1898.

EDMUND HUNT,  
Applicant's Agent.







[This Drawing is a reproduction of the Original on a reduced scale]





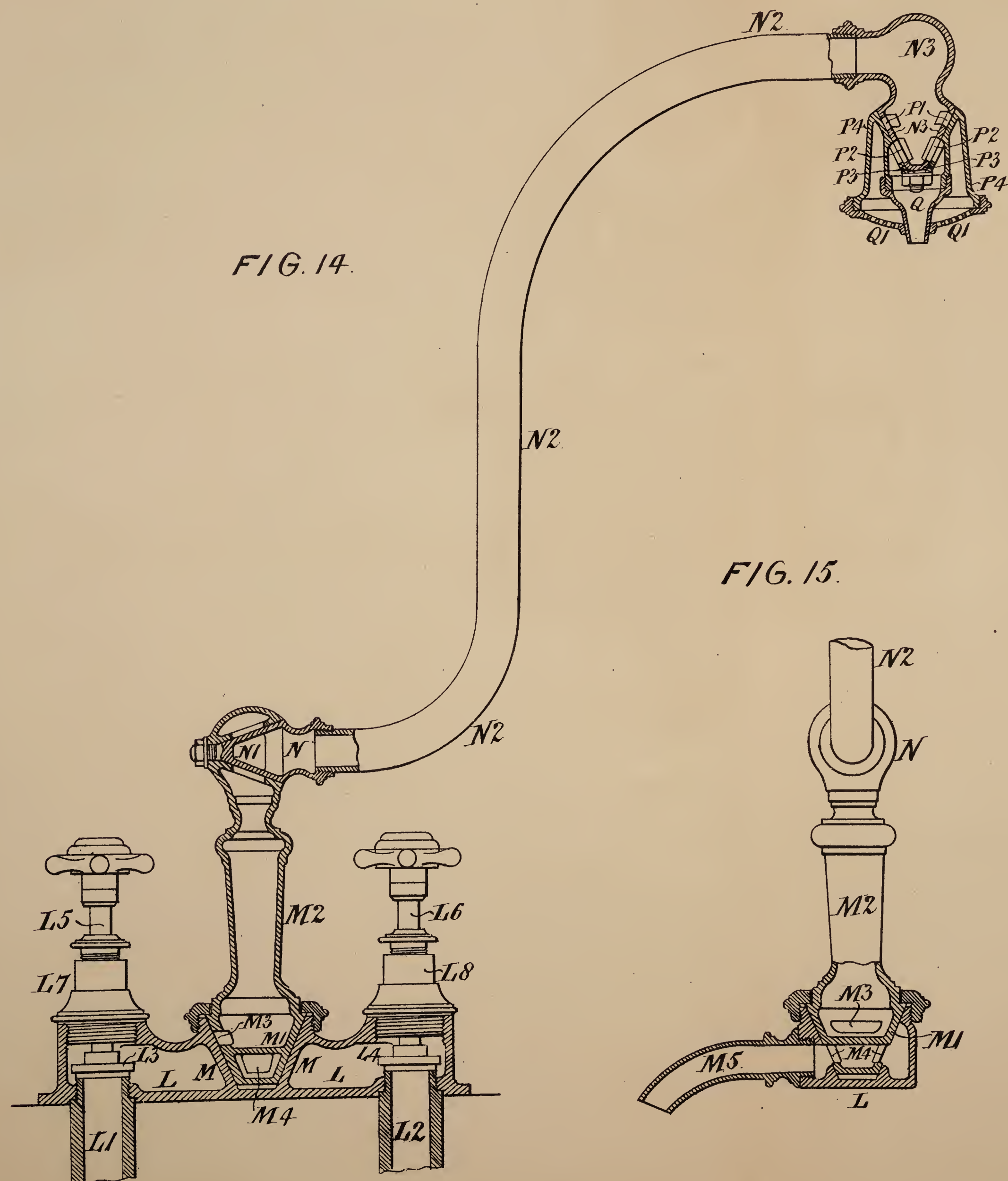
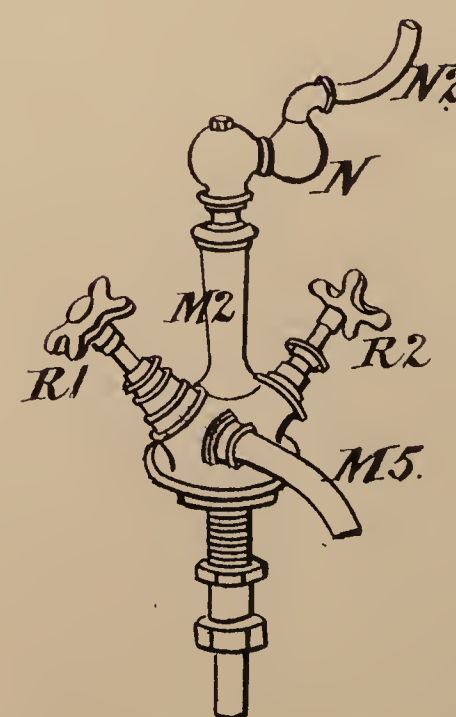


FIG. 16.



[This Drawing is a reproduction of the Original on a reduced scale.]

